



US Army Corps
Of Engineers
Wilmington District

PUBLIC NOTICE

Issue Date: February 15, 2008
Comment Deadline: March 17, 2008
Corps Action ID #: SAW-2008-00373

The Wilmington District, Corps of Engineers (Corps) has received an application from the Town of Cary, Engineering Department seeking Department of the Army authorization for permanent impacts to 0.72 acre of jurisdictional forested wetlands, and 3,412 linear feet of perennial stream channel exhibiting important aquatic functions. The impacts listed above are associated with the extension of Morrisville Parkway between North Carolina Highway 55 (NC 55) and Green Level Church Road near Cary, Wake County, North Carolina. This extension is identified as Phase III of Morrisville Parkway and includes a proposed interchange with the future Western Wake Freeway (I-540).

Specific plans and location information are described below and shown on the attached plans. This Public Notice and all attached plans are also available on the Wilmington District Web Site at www.saw.usace.army.mil/wetlands

Applicant: Town of Cary, Engineering Department
Attn: Mr. Russ Overton
Post Office Box 8005
Cary, North Carolina 27512-8005

AGENT (if applicable): URS Corporation
Attn: Mr. Charles E. Benton
1600 Perimeter Park Drive, Suite 400
Morrisville, NC 27560-8421

Authority

The Corps will evaluate this application and decide whether to issue, conditionally issue, or deny the proposed work pursuant to applicable procedures of Section 404 of the Clean Water Act.

Location

The proposed project location is between NC 55 westward for a distance of approximately 3 miles to a terminus with SR 1625, Green Level to Durham Road at SR 1600, Green Level Church Road near Cary, Wake County, North Carolina. Coordinates, in decimal degrees, for the end points of the construction areas are 35.813720° N,

78.872747° W, and 35.802659 ° N, 78.909490 ° W. The project site contains several wetlands and unnamed streams channels which drain to Panther Creek in the Haw watershed of the Cape Fear River Basin (8-Digit Cataloging Unit of 03030002).

Existing Site Conditions

The proposed project would extend Morrisville Parkway, which currently terminates on the east side of NC 55, and create a roadway linking NC 55 to Green Level to Durham Road. Overall, the project study area is bordered to the east by NC 55, to the west by Green Level Church Road, to the north by undeveloped forest land and residential properties, and to the south by Green Hope School Road. The existing conditions within this project segment include upland hardwood/pine forest, several wetlands, and several unnamed streams draining to Panther Creek in the Cape Fear River Basin.

The upland forest is dominated by loblolly pine (*Pinus taeda*), white oak (*Quercus alba*), and tulip poplar (*Liriodendron tulipifera*). Flowering dogwood (*Cornus florida*), arrowwood (*Viburnum dentatum*), and saplings of red maple (*Acer rubrum*) dominate the understory. Typical wetland vegetation is dominated by sweetgum (*Liquidambar styraciflua*), red maple, and slippery elm (*Ulmus rubra*) within the canopy. Blueberry (*Vaccinium corymbosum*), sedge (*Carex* sp.), and soft rush (*Juncus effusus*) are common in the understory and herbaceous layer. A Corps jurisdictional determination has verified the waters of the U.S. on the study property.

Applicant's Stated Purpose

The project purpose for the proposed activity is to extend Morrisville Parkway from NC 55 to Green Level to Durham Road near Cary, Wake County, North Carolina.

Project Description

Portions of Morrisville Parkway have previously been constructed. This proposal is to extend the existing portion of roadway, currently terminating at NC 55, to Green Level to Durham Road at Green Level Church Road. The ultimate design would be similar to the existing sections of Morrisville Parkway which includes a 105-foot wide, 4-lane median divided roadway, including 5-foot wide sidewalks and 5-foot wide utility strips to be situated on both sides of the roadway. Included within this proposal is an interchange with the future Western Wake Freeway (I-540). Fill slopes are proposed at a 2:1 ratio. Total permanent impacts from this proposal are 0.72 acre of jurisdictional forested wetlands, and 3,412 linear feet of perennial stream channel exhibiting important aquatic functions.

This permit proposal will be evaluated on the dimensions and aquatic impacts stated above. However, construction of the proposed roadway would take place in three distinct stages. Stage 1A is proposed for the section between Green Level Church Road and the future Western Wake Freeway (I-540). The proposed design is an approximately 2,500-foot long, 40-foot wide, 2-line paved road, with an associated 10-foot wide concrete

greenway trail. To accommodate the roadway alignment, two culverted stream crossings are proposed. Final designs have been utilized for this stage.

Stage 1B is an approximately 12,500-foot long, 40-foot wide, 2-lane road, with an associated 12-foot wide concrete sidewalk, and would be constructed from NC 55 to the Stage 1A terminus. To accommodate the roadway alignment, four culverted stream crossings and one wetland crossing is proposed. Currently, only preliminary designs are available for this stage.

Stage 2 is proposed when current/eminent traffic forecasts support the widening of the 2-lane road to a 4-lane road from NC 55 to Green Level to Durham Road. At this time, the interchange with I-540 would be completed. Impacts assessed for this stage include all culvert extensions required for the typical roadway widening and interchange construction project. Designs are only preliminary for this stage

The Town of Cary is utilizing this long-range planning approach for a fair evaluation on the corridor and expected impacts of this roadway, rather than waiting and allowing future development to limit the overall flexibility required for impact avoidance and/or minimization. If permitted, Stage 1A would be constructed using the final designs depicted within this Public Notice. The other 2 phases would be permitted on the impacts stated above, realizing that these are worse-case scenarios. Final designs for each stage would be provided to the Corps for a permit modification prior to construction. At the time of permit modification, additional avoidance or minimization would be evaluated for items such as bridging, fill slopes, etc. It is expected that impact amounts would go down during the time of permit modification.

To mitigate for permanent impacts to jurisdictional wetlands and streams, the applicant has proposed payment into the North Carolina Ecosystem Enhancement Program (NCEEP). This payment would be prior to the time of impact for each respective stage.

Other Required Authorizations

This notice and all applicable application materials are being forwarded to the appropriate State agencies for review. The Corps will generally not make a final permit decision until the North Carolina Division of Water Quality (NCDWQ) issues, denies, or waives State Certification required by Section 401 of the Clean Water Act (PL 92-500). The receipt of the application and this public notice combined with appropriate application fee at the North Carolina Division of Water Quality central office in Raleigh will constitute initial receipt of an application for a 401 Water Quality Certification. A waiver will be deemed to occur if the NCDWQ fails to act on this request for certification within sixty days of the date of the receipt of this notice in the NCDWQ Central Office. Additional information regarding the Clean Water Act certification may be reviewed at the NCDWQ Central Office, 401 Oversight and Express Permits Unit, 2321 Crabtree Boulevard, Raleigh, North Carolina 27604-2260. All persons desiring to make comments regarding the application for certification under Section 401 of the Clean Water Act should do so in

writing delivered to the North Carolina Division of Water Quality (NCDWQ), 1650 Mail Service Center, Raleigh, North Carolina 27699-1650 Attention: Ms Cyndi Karoly by March 7, 2008.

Essential Fish Habitat

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The Corps' initial determination is that the proposed project will not adversely impact EFH or associated fisheries managed by the South Atlantic or Mid Atlantic Fishery Management Councils or the National Marine Fisheries Service.

Cultural Resources

The Corps has consulted the latest published version of the National Register of Historic Places and is not aware that any registered properties, or properties listed as being eligible for inclusion therein are located within the project area or will be affected by the proposed work. Presently, unknown archeological, scientific, prehistoric, or historical data may be located within the project area and/or could be affected by the proposed work.

Endangered Species

The Corps has reviewed the project area, examined all information provided by the applicant and consulted the latest North Carolina Natural Heritage Database. Based on available information, the Corps has determined pursuant to the Endangered Species Act of 1973, that the proposed project will have no effect on federally listed endangered or threatened species or their formally designated critical habitat.

Evaluation

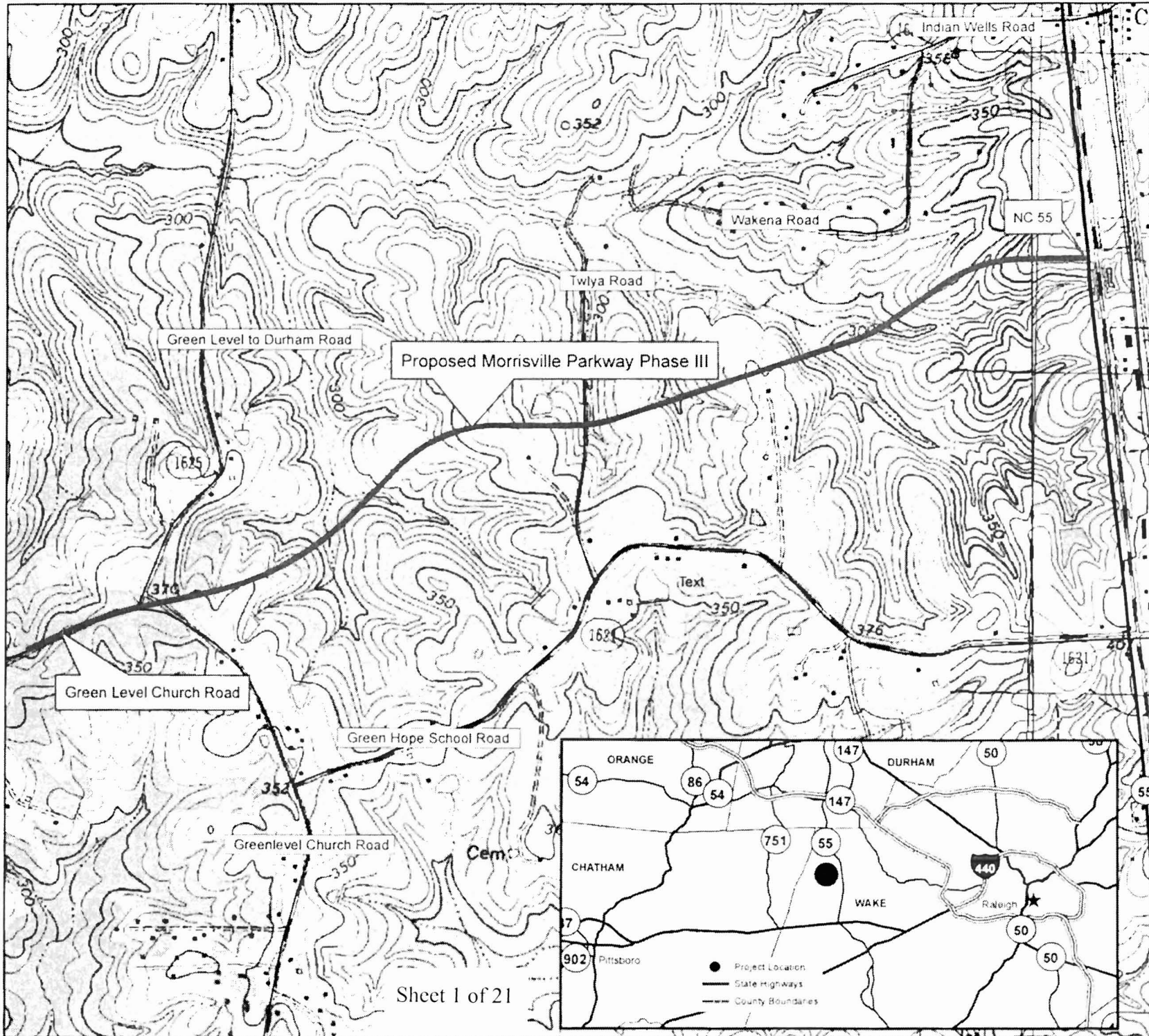
The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values (in accordance with Executive Order 11988), land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving the discharge of dredged or fill materials in waters of the United States, the evaluation of the impact of the activity on the public interest will include application of the Environmental Protection Agency's 404(b)(1) guidelines.

Commenting Information

The Corps of Engineers is soliciting comments from the public; Federal, State and local agencies and officials, including any consolidate State Viewpoint or written position of the Governor; Indian Tribes and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment (EA) and/or an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Requests for a public hearing shall be granted, unless the District Engineer determines that the issues raised are insubstantial or there is otherwise no valid interest to be served by a hearing.

Written comments pertinent to the proposed work, as outlined above, will be received by the Corps of Engineers, Wilmington District, until 5pm, March 17, 2008. Comments should be submitted to Monte Matthews, Raleigh Regulatory Field Office, 3331 Heritage Trade Drive, Suite 105, Wake Forest, North Carolina 27587.



Proposed Morrisville Parkway Phase III

Green Level to Durham Road

Green Level Church Road

Green Hope School Road

Greenlevel Church Road

Cem.

Text

Indian Wells Road

Wakena Road

Twyla Road

NC 55

Figure 1:
Vicinity Map

Morrisville Parkway
Extension Phase III

TOC Project No.
ST-1123

Legend

— Proposed Centerline

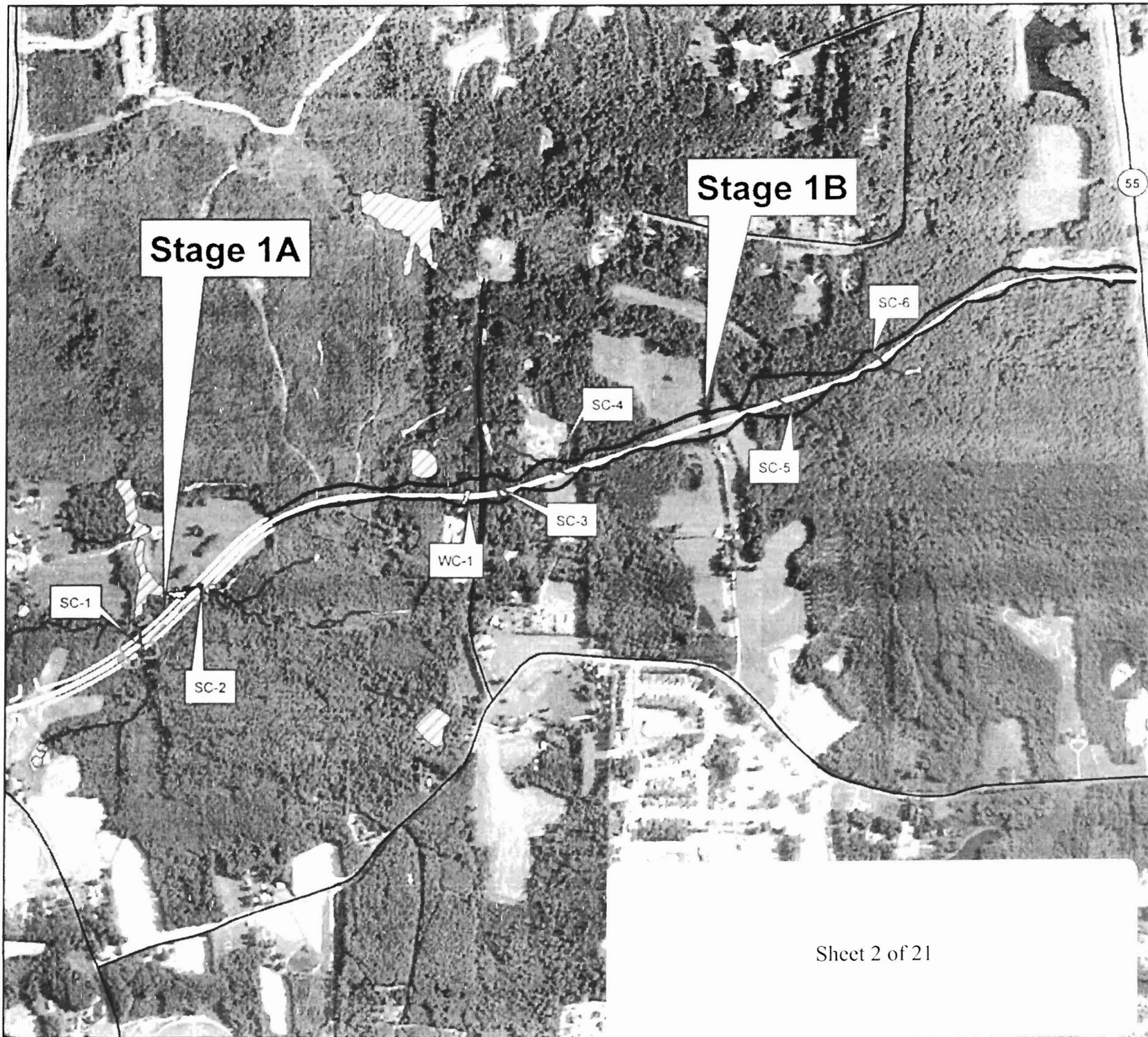


0 500 1,000
Feet

URS
Morrisville, NC

10/1/2014

Sources: Wake County, NC;
ESRI, Inc; Town of Cary, NC;
USGS 7.5 minute Cary, NC
and Green Level, NC
topographic quads.



**Figure 3:
Stage 1 Impacts**

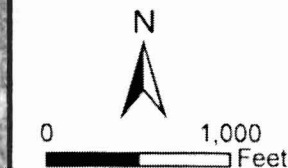
**Morrisville Parkway
Extension Phase III**

**TOC Project No.
ST-1123**

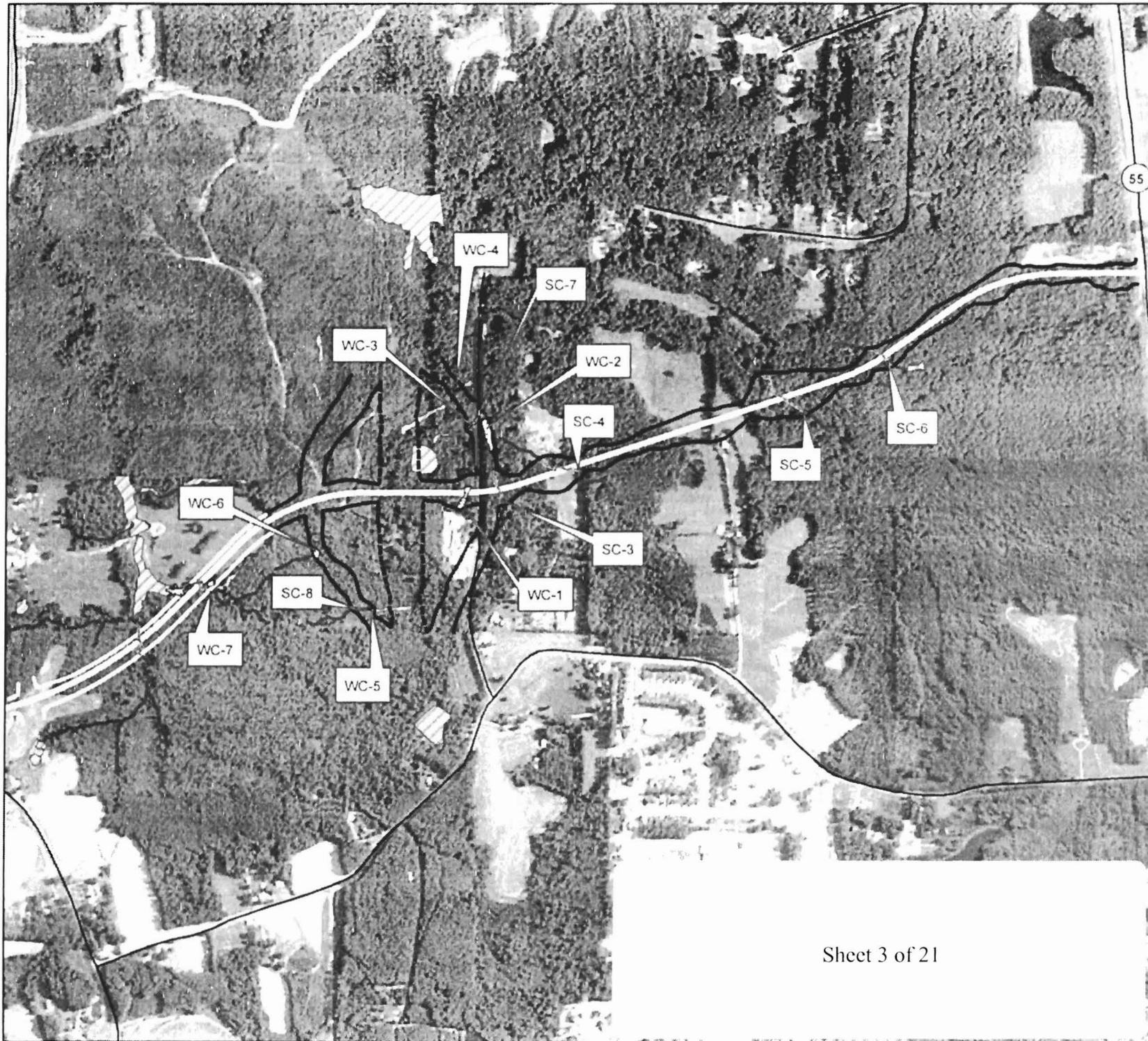
Legend

- Proposed Centerline
- Stage 1A Right-of-Way
- Stage 1A Disturbance Limits
- Stage 1B Slope Stake Limits
- Stream Impacts
- Wetland Impacts
- Streams
- Wetlands

- SC-# Stream Crossing
- WC-# Wetland Crossing



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Morrisville, NC



**Figure 4:
Stage 2 Impacts**

**Morrisville Parkway
Extension Phase III**

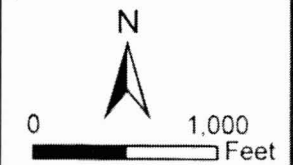
**TOC Project No.
ST-1123**

Legend

- Proposed Centerline
- Stage 2 - Greystone R/W Limits
- Stage 2 Slope Stake Limits
- Future I-640 Disturbance Limits
- Stage 2 Stream Impacts
- Stage 2 Wetlands Impacts
- Stage 1 Stream Impacts
- Stage 1 Wetland Impacts
- Streams
- Wetlands

SC-# Stream Crossing

WC-# Wetland Crossing



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Morrisville, NC

STAGE 1A - (GREYSTONE SUBDIVISION AREA) WETLAND AND STREAM IMPACTS

Figure No.	Impact No.**	Permanent Impact Type	linear feet**	square feet**
SC-1	1A	Perennial Stream	365	1,135
	1B	Section 404 Forested Wetland	N/A	91
	1C	Section 404 Forested Wetland	N/A	153
SC-2	2A	Perennial Stream	366	1,274
	2B	Section 404 Forested Wetland		2,617
	2C	Section 404 Forested Wetland		4,538
Total			731	9,808

** Based on final design (see Appendix B for plan drawings).

STAGE 1B – 2-LANE ROADWAY: NC-55 TO GREYSTONE SUBDIVISION WETLAND AND STREAM IMPACTS

Figure No.	Permanent Impact Type	linear feet*	square feet*
SC-3	Perennial Stream	241	2,410
SC-4	Perennial Stream	361	3,610
SC-5	Perennial Stream	495	4,950
SC-6	Perennial Stream	200	2,000
WC-1	Section 404 Forested Wetland	N/A	4,356
Total		1297	17,326

* Estimate based on preliminary design.

STAGE 2 – 4-LANE ROADWAY: NC-55 TO GREEN LEVEL CHURCH ROAD WETLAND AND STREAM IMPACTS

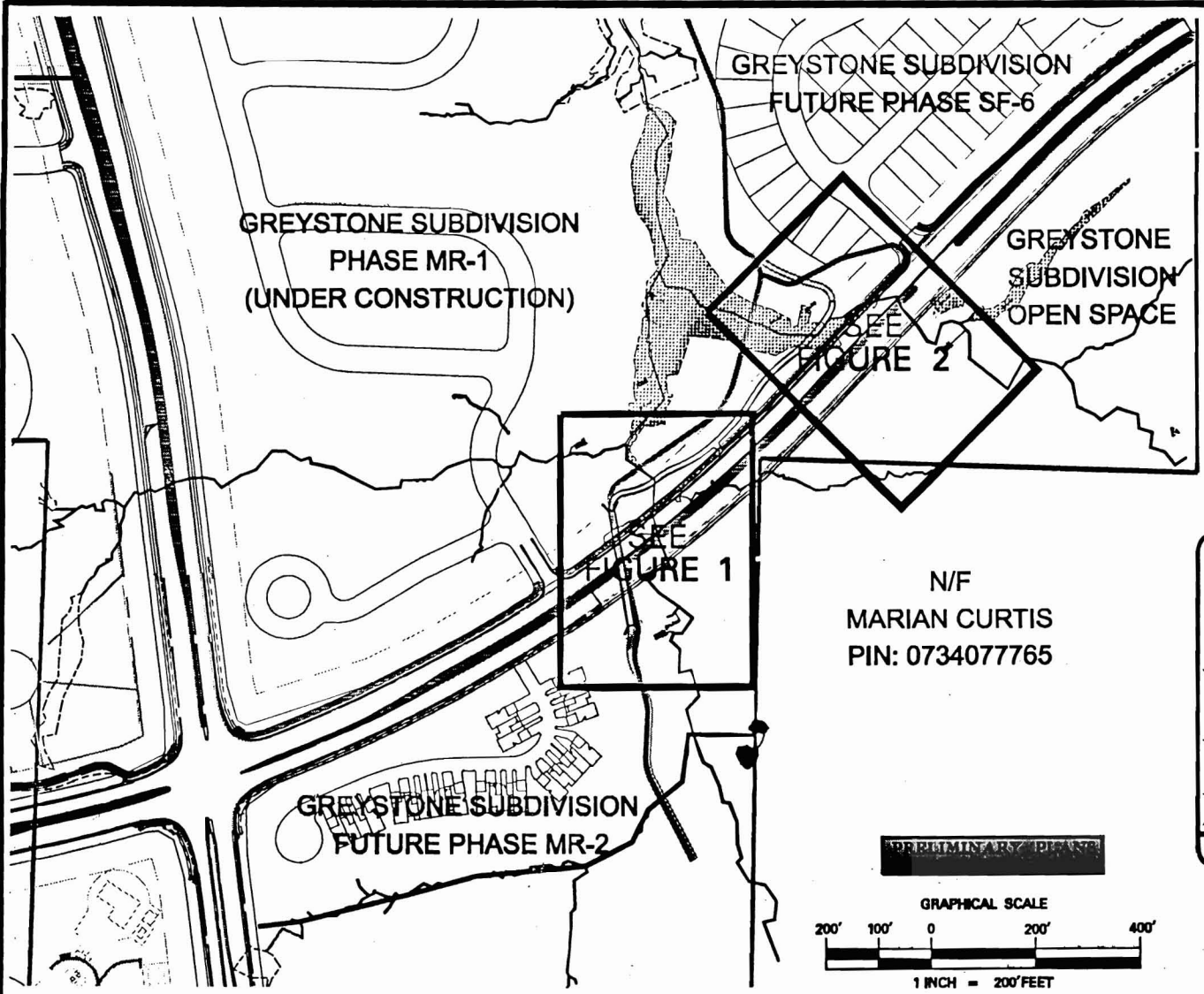
Figure No.	Permanent Impact Type	linear feet***	square feet***
SC-1	Perennial Stream	0	0
SC-2	Perennial Stream	0	0
SC-3	Perennial Stream	546	5,460
SC-4	Perennial Stream	84	840
SC-5	Perennial Stream	50	500
SC-6	Perennial Stream	60	600
SC-7	Perennial Stream	508	508
SC-8	Perennial Stream	136	136
WC-1	Section 404 Forested Wetland	N/A	2,178
WC-2	Section 404 Forested Wetland	N/A	9,583
WC-3	Section 404 Forested Wetland	N/A	1,307
WC-4	Section 404 Forested Wetland	N/A	871
WC-5	Section 404 Forested Wetland	N/A	871
WC-6	Section 404 Forested Wetland	N/A	2,614
WC-7	Section 404 Forested Wetland	N/A	2,000
Total		1,384	27,468

*** Estimate based on preliminary design for the Stage 2 additional impacts.

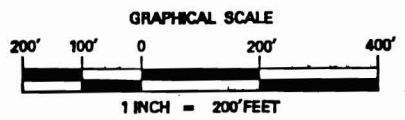
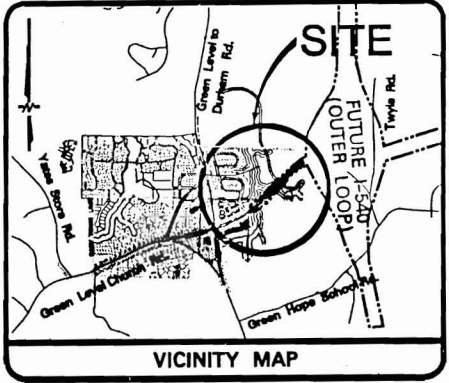
SUMMARY OF OVERALL WETLAND AND STREAM IMPACTS (ALL STAGES)

		Project Stage			Total*
		Stage 1A	Stage 1B	Stage 2	
		Greystone Subdivision	2-Lane Road (NC 55 to Greystone Subdivision)*	4-Lane Road (NC 55 to Green Level Church Road)*	
Permanent Impacts	Section 404 Forested Wetlands (acre)	0.17	0.10	0.45	0.72
	Perennial Streams (linear feet)	731	1,297	1,384	3,412
Temporary Impacts	Section 404 Forested Wetlands (acre)	0.00	To be determined (TBD)	TBD	TBD
	Perennial Streams (linear feet)	0	TBD	TBD	TBD

* Estimate based on preliminary design.



IMPACT SUMMARY TABLE			
FIGURE NO.	TYPE	CHANNEL/ WETLAND SQUARE FT.	CHANNEL LINEAR FT.
1	CHANNEL WETLAND	1,136 SF 244 SF	366 LF N/A
2	CHANNEL WETLAND	1,274 SF 7,155 SF	366 LF N/A
TOTAL		9,806 SF	731 LF

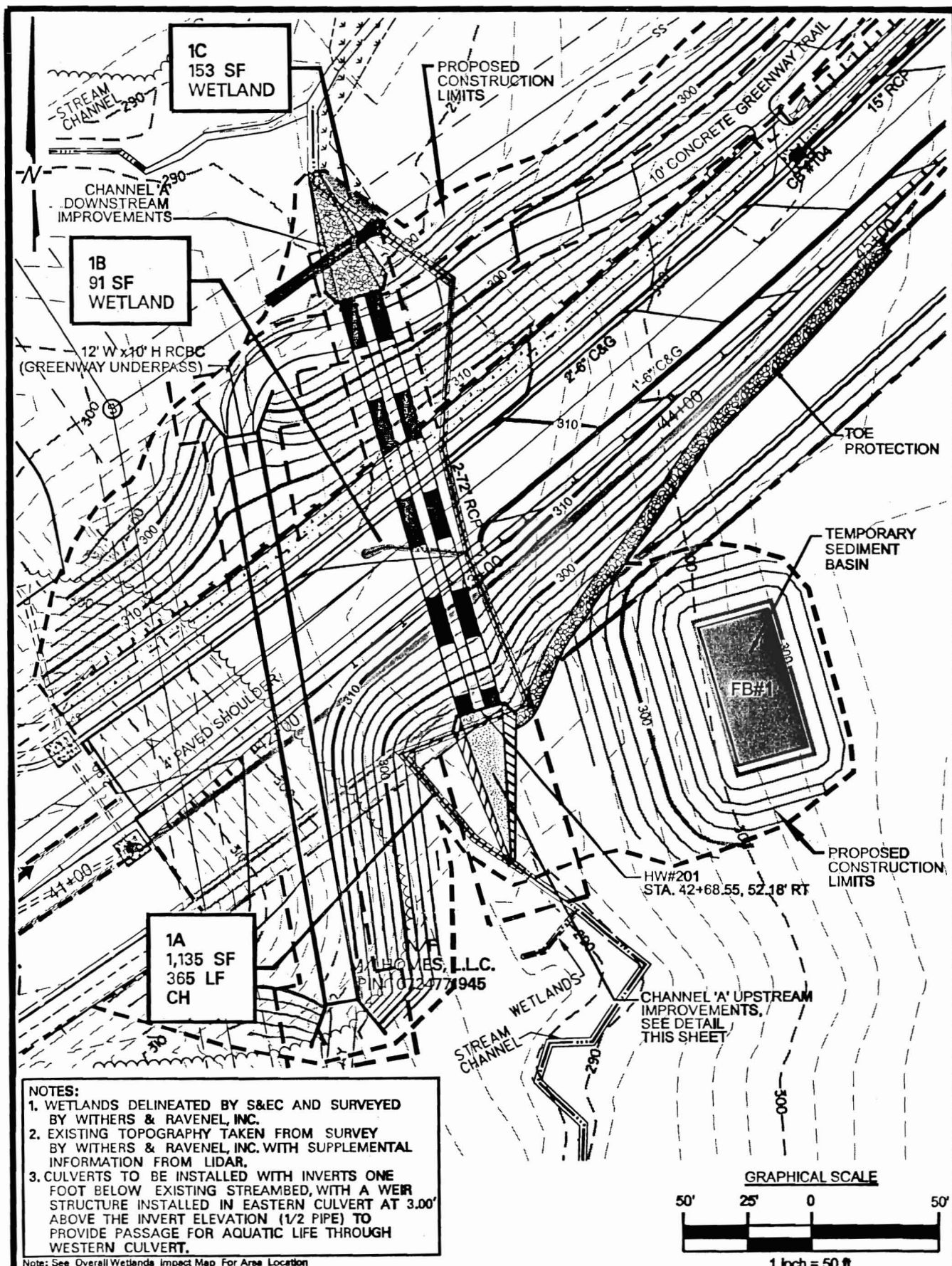


NOTES:
 1. WETLANDS DELINEATED BY S&EC AND SURVEYED BY WITHERS & RAVENEL, INC.
 2. EXISTING TOPOGRAPHY TAKEN FROM SURVEY BY WITHERS & RAVENEL, INC. WITH SUPPLEMENTAL INFORMATION FROM LIDAR.

Rev	Description	Date	By	Check	Scale	Cad
1	Initial	08/11/2011	W. R.	W. R.	1"=200'	W. R.
2	Revised	08/11/2011	W. R.	W. R.	1"=200'	W. R.
3	Revised	08/11/2011	W. R.	W. R.	1"=200'	W. R.
4	Revised	08/11/2011	W. R.	W. R.	1"=200'	W. R.

GREYSTONE THOROUGHFARE IMPROVEMENTS - PHASE 3
 MORRISVILLE PARKWAY
 CARY, WAKE COUNTY, NORTH CAROLINA

PROPOSED WETLAND IMPACTS



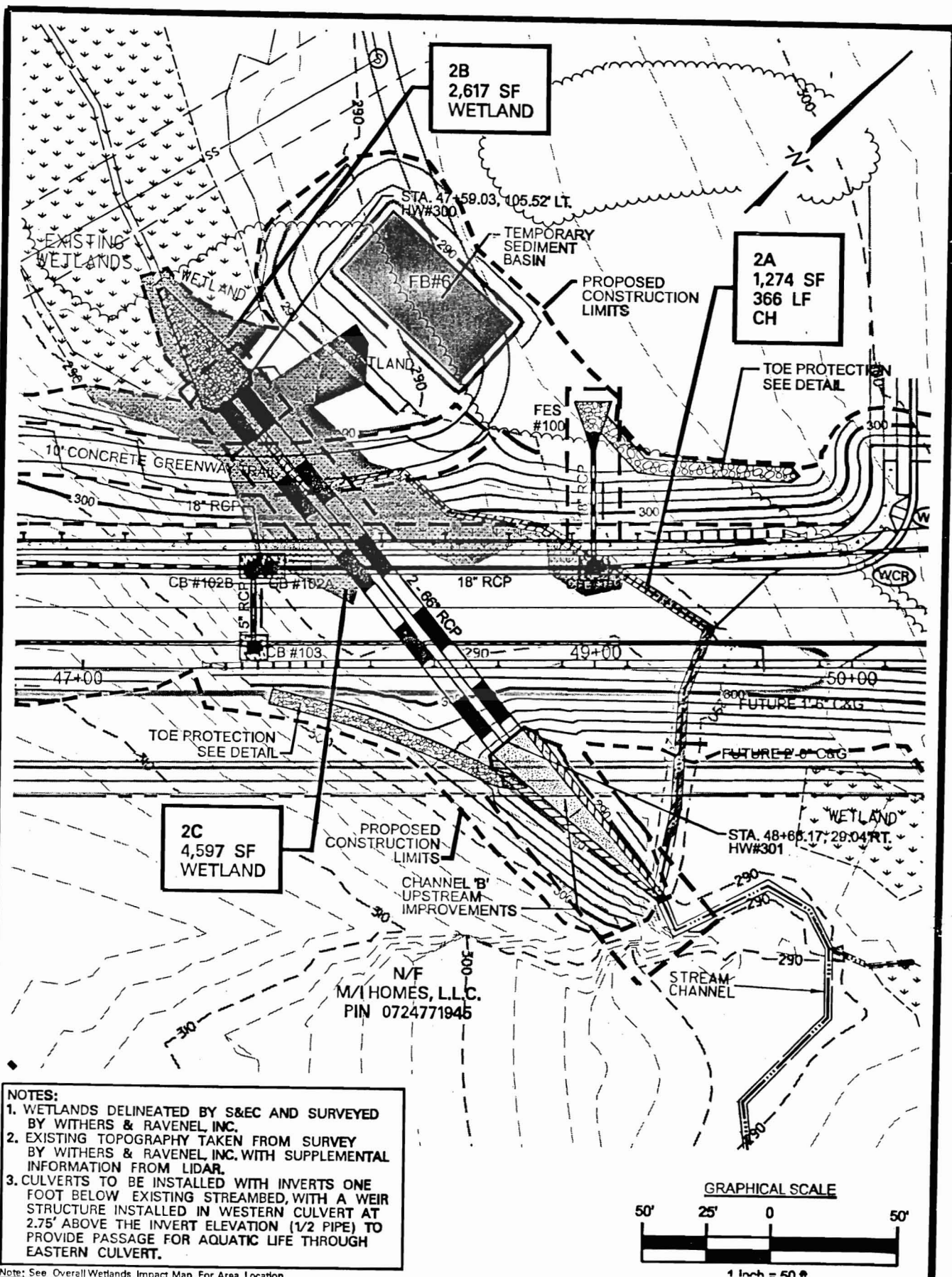
WITHERS & RAVENEL

ENGINEERS | PLANNERS | SURVEYORS

111 MacLennan Drive Cary, North Carolina 27511 Tel: 919-488-2868 Fax: 919-487-8888 www.wrtherravenel.com

Stage 1A - Final Design Drawings

Sheet 7 of 21



WITHERS & RAVENEL
ENGINEERS | PLANNERS | SURVEYORS

111 MacKinnon Drive Cary, North Carolina 27511 Tel: 919-488-8949 Fax: 919-487-8888 www.wrtherravenel.com

Stage 1A - Final Design Drawings

Sheet 8 of 21

0/17/99

-MPE3-
 PI Sta 59+41.32
 $\Delta = 45^{\circ} 01' 19.4" (RT)$
 $D = 4^{\circ} 00' 00.0"$
 $L = 1750.55'$
 $T = 608.34'$
 $R = 1432.39'$
 $e = 3.7\%$
 $R.D. = 148'$

Prepared by

URS

PROJECT REFERENCE NO.	SHEET NO.
ST 1123	5
DWG SHEET NO.	
PROJECT NUMBER	

INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



N/E
TOWN OF CARY
PIN 0735-00-2296
DB 8923 / PG 1826

BY OTHERS

WATCH LINE - WES - STA 49+00 SEE SHEET 4

Stage 1B and 2 - Preliminary Drawings

Sheet 9 of 21

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000005YSTIME0000
000006*****COGN*****
000007*****USE*****

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NOTE: ALL WORK GENERATED USING AVAILABLE GIS DATA PROVIDED BY THE TOWN OF CARY. NO FIELD DELINIATION OF ENVIRONMENTAL FEATURES HAS BEEN COMPLETED.

NOTE: PROPERTY AND EXISTING TOPO DATA INCOMPLETE FOR -MPE3- PROFILE. SEE SHEET 15

Prepared by

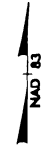
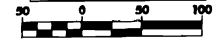
URS

URS Corporation - North Carolina
1600 Perimeter Park Drive
Suite 400
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415

PROJECT REFERENCE NO.	DRAWING NO.
ST 1123	7

BY DATE NO.
PROJECT ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR S/U'S ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



N/E
TALBERT EDWARD &
ELIZABETH BLANKELY REATINS
PIN 0735-20-353
DB 4228 / PG 17

N/E
LAWRENCE JAMES &
DEBORAH S. ORBERT
PIN 0724-28-2947
DB 4548 / PG 508

N/E
JAMES RUTH HILLARD
PIN 0734-29-240
DB 3616 / PG 93

N/E
JAMES RUTH HILLARD
PIN 0734-29-328
DB 3676 / PG 93

W/2
JAMES RUTH HILLARD
PIN 0734-29-240
DB 3616 / PG 93

PROPERTY OWNER
(TO BE DETERMINED)

DB -MPE3-1

W/2
JAMES RUTH HILLARD
PIN 0734-29-240
DB 3616 / PG 93

Stage 1B and 2 - Preliminary Drawings

Sheet 11 of 21

8/17/96

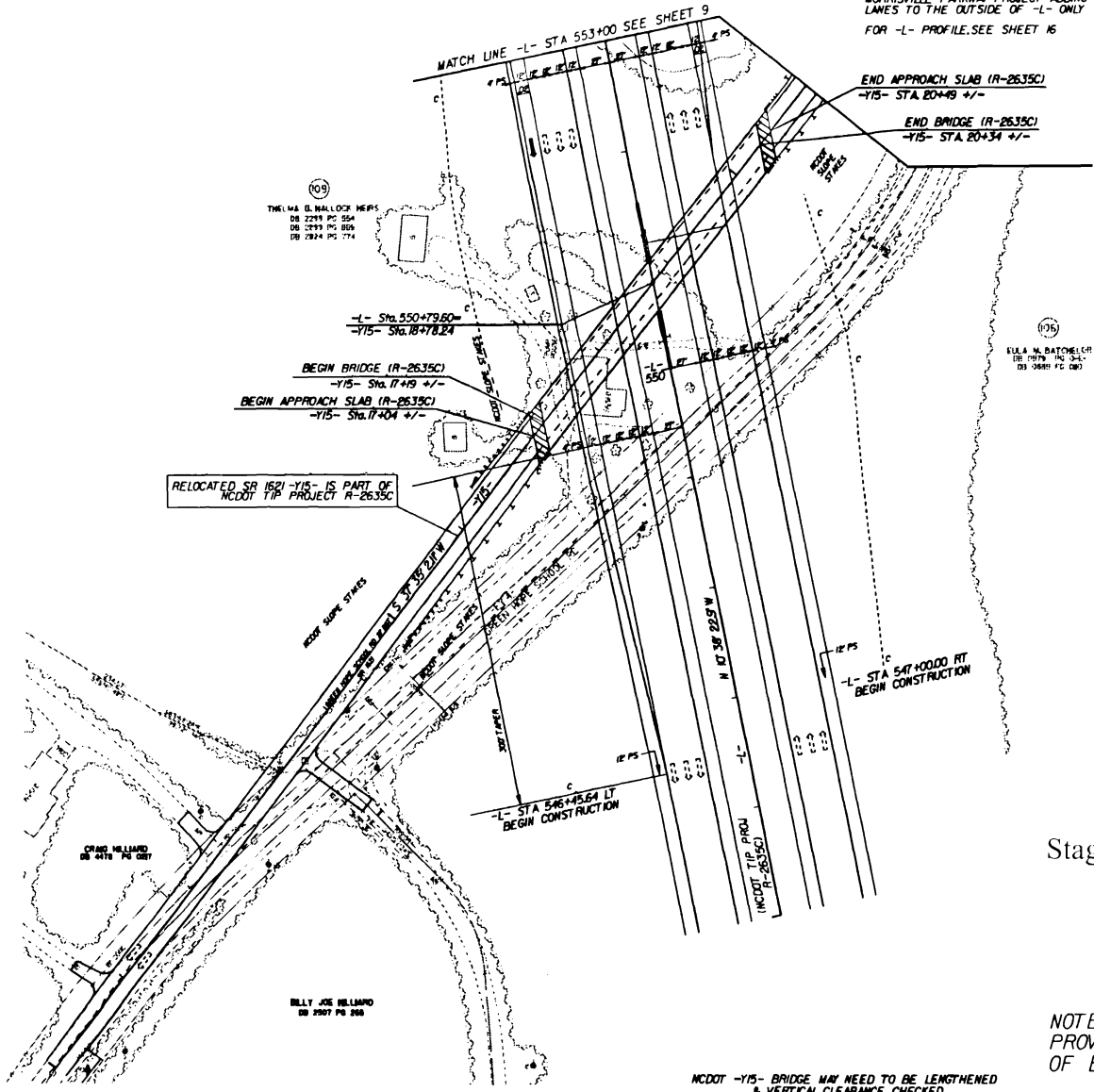
NOTE: PROPERTY AND EXISTING TOPO DATA INCOMPLETE
NCDOT TIP PROJECT R-2635 SHOWN DASHED.
MORRISVILLE PARKWAY PROJECT ADDING ACCEL/ DECEL
LANES TO THE OUTSIDE OF -L- ONLY
FOR -L- PROFILE, SEE SHEET 16

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PROJECT REFERENCE NO.	SHEET NO.
ST 1123	8
SHEET NO.	
PROJECT NAME	

INCOMPLETE PLANS DO NOT USE FOR S/W ACQUISITION
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

50 0 50 100



Stage 1B and 2 - Preliminary Drawings

Sheet 12 of 21

NOTE: ALL WORK GENERATED USING AVAILABLE GIS DATA
PROVIDED BY THE TOWN OF CARY. NO FIELD DELINEATION
OF ENVIRONMENTAL FEATURES HAS BEEN COMPLETED.

NCDOT -YIS- BRIDGE MAY NEED TO BE LENGTHENED
& VERTICAL CLEARANCE CHECKED

8/17/14

NOTE: NCDOT TIP PROJECT R-2635 SHOWN DASHED.

MORRISVILLE PARKWAY PROJECT ADDING ACCEL/ DECEL LANES TO THE OUTSIDE OF -L- ONLY

FOR -L- PROFILE, SEE SHEET 16
FOR -RPC- PROFILE, SEE SHEET 21
FOR -RPD- PROFILE, SEE SHEET 22

Prepared by

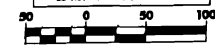
URS

URS Corporation - North Carolina
1600 Perimeter Park Drive
Suite 400
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415

PROJECT REFERENCE NO. ST 1123
SHEET NO. 9

OFF SHEET NO. PROJECT BARRIER

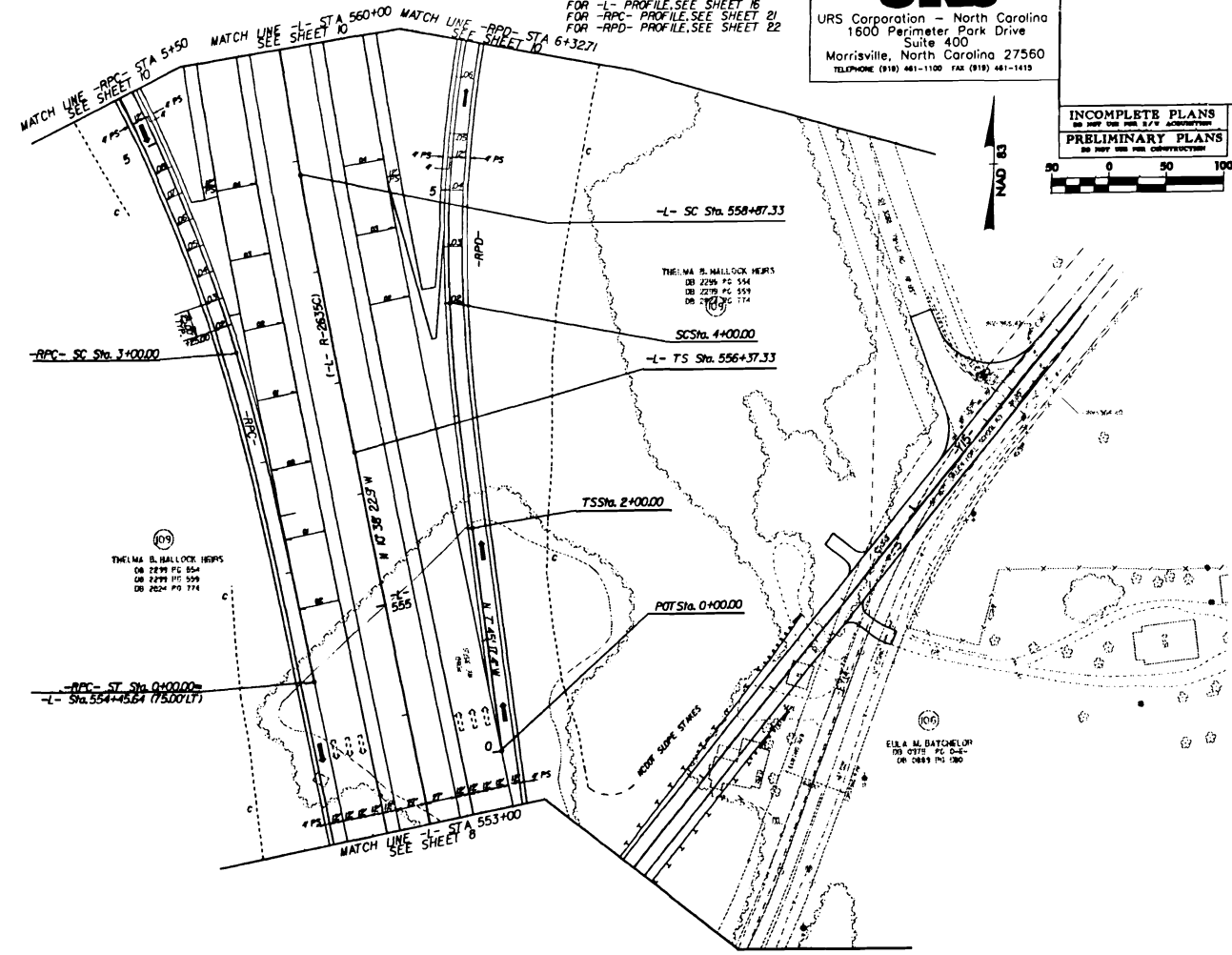
INCOMPLETE PLANS
DO NOT USE FOR S/T ACCURACY
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



-L- CURVE DATA
(NCDOT TIP R-2635C)
RM Sta 558+04.00 PI Sta 563+80.04
QA = 111.52' Δ = 9°25'45.7" (RT)
LS = 280.00' D = 0.57117
LT = 166.69' L = 809.9'
ST = 83.34' T = 495.34'
R = 6000.00'
e = 4%

-RPC- CURVE DATA
PIs Sta 2+00.00 PI Sta 5+08.90
QA = 5'43" 46.5' Δ = 15°51'25.1" (LT)
LS = 300.00' D = 3'49" 110'
LT = 200.00' L = 415.13'
ST = 100.00' T = 206.90'
R = 1200.00'
e = 8%

-RPD- CURVE DATA
PIs Sta 3+33.39 PI Sta 7+44.20
QA = 5'00" 14.4' Δ = 33°27'45.1" (RT)
LS = 200.00' D = 5'00" 14.4'
LT = 133.39' L = 668.72'
ST = 66.72' T = 344.20'
R = 145.00'
e = 8%



NOTE: ALL WORK GENERATED USING AVAILABLE GIS DATA PROVIDED BY THE TOWN OF CARY. NO FIELD DELINEATION OF ENVIRONMENTAL FEATURES HAS BEEN COMPLETED.

Stage 1B and 2 - Preliminary Drawings

Sheet 13 of 21

-L- CURVE DATA
(NCDOT TIP R-2635C)

PI Sta 563+83.04
Δ = 5° 25' 45" (RT)
D = 57.117
L = 994.9
T = 153.2
R = 6,000.00
e = 4%

-RPC- CURVE DATA

PI Sta 5+08.90
Δ = 15° 57' 25" (LT)
D = 3' 49" (LT)
L = 415.3
T = 208.90
R = 1,500.00
e = 8%

-RPD- CURVE DATA

PI Sta 7+44.20
Δ = 33° 27' 45" (RT)
D = 5' 00" (RT)
L = 668.72
T = 344.50
R = 1,450.00
e = 8%

NOTE: NCDOT TIP PROJECT R-2635 SHOWN DASHED.

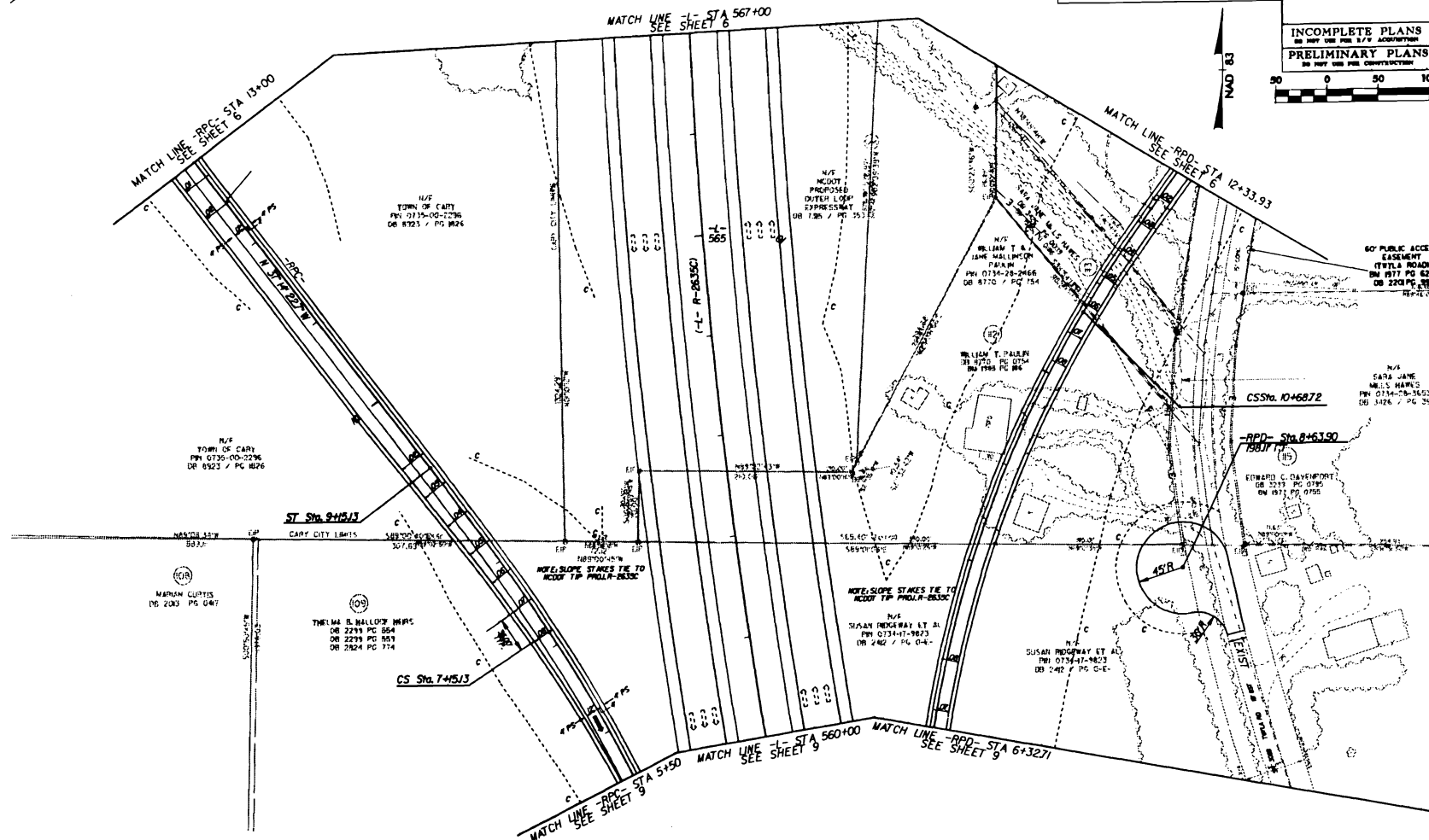
MORRISVILLE PARKWAY PROJECT ADDING ACCEL/ DECEL LANES TO THE OUTSIDE OF "L" ONLY

FOR -L- PROFILE, SEE SHEET 16
FOR -RPC- PROFILE, SEE SHEET 21
FOR -RPD- PROFILE, SEE SHEET 22

Prepared by
URS
URS Corporation - North Carolina
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Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415

PROJECT REFERENCE NO.
ST 1123
SHEET NO.
10

INCOMPLETE PLANS
DO NOT USE FOR CONSTRUCTION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



NOTE: ALL WORK GENERATED USING AVAILABLE GIS DATA PROVIDED BY THE TOWN OF CARY. NO FIELD DELINEATION OF ENVIRONMENTAL FEATURES HAS BEEN COMPLETED.

Stage 1B and 2 - Preliminary Drawings

P1a Sta 5+49.23 $\Delta = 26.12^\circ 45.2' (LT)$ $D = 3' 49.110"$ $L = 686.24'$ $T = 349.23'$ $R = 1,500.00'$ $\theta = 8X$ RO = SEE PLANS	P1b Sta 9+82.33 $\theta b = 5' 30" 01.4"$ $Lb = 288.00'$ $LT = 192.09'$ $ST = 96.08'$	P1c Sta 13+66.60 $\theta c = 10' 47" 06.3"$ $Lc = 288.00'$ $LT = 192.36'$ $ST = 96.33'$
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Pl Sta 11+86.61	Pls Sta 15+91.27
$\Delta = 26^{\circ} 17' 24.2''$ (RT)	$\Theta s = 3^{\circ} 49' 11.0''$
$D = 3^{\circ} 49' 11.0''$	$Ls = 200.00'$
$L = 688.27'$	$LT = 133.36'$
$T = 350.30'$	$ST = 66.69'$
$R = 1,500.00'$	
$e = 8\%$	
$RO = 200'$	

MORRISVILLE PARKWAY PROJECT ADDING ACCEL/ DECEL
LANES TO THE OUTSIDE OF -L- ONLY
PROPERTY AND EXISTING TOPO DATA INCOMPLETE
FOR -L- PROFILE, SEE SHEET 17
FOR -RPA- PROFILE, SEE SHEET 19
FOR -RPB- PROFILE, SEE SHEET 20, 21

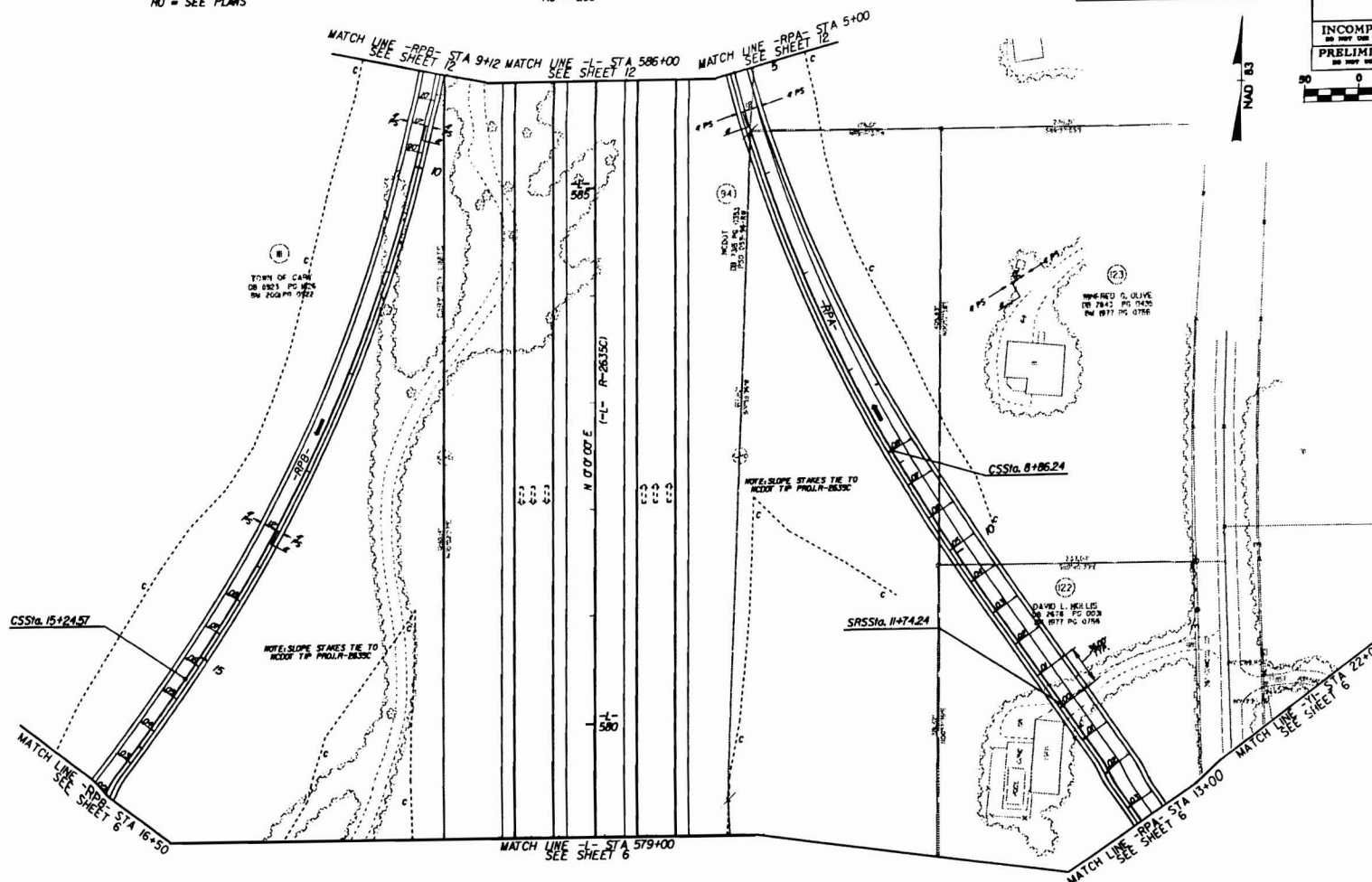
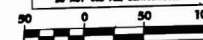
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URS Corporation - North Carolina
1600 Perimeter Park Drive
Suite 400
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415

PROJECT REFERENCE NO.	SHEET NO.
ST 1123	11
NEW SHEET NO.	

INCOMPLETE PLANS
DO NOT USE FOR B/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



NOTE: ALL WORK GENERATED USING AVAILABLE GIS DATA PROVIDED BY THE TOWN OF CARY. NO FIELD DELINIATION OF ENVIRONMENTAL FEATURES HAS BEEN COMPLETED.

Stage 1B and 2 - Preliminary Drawings

Sheet 15 of 21

NOTE: ALL WORK GENERATED USING AVAILABLE GIS DATA PROVIDED BY THE TOWN OF CARY. NO FIELD DELINEATION OF ENVIRONMENTAL FEATURES HAS BEEN COMPLETED.

NOTE: NCDOT TIP PROJECT R-2635 SHOWN DASHED.

MORRISVILLE PARKWAY PROJECT ADDING ACCEL/ DECEL LANES TO THE OUTSIDE OF -L- ONLY

FOR -L- PROFILE SEE SHEET 17
FOR -RPA- PROFILE SEE SHEET 19
FOR -RPB- PROFILE SEE SHEET 20

Prepared by

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PROJECT REFERENCE NO. ST 1123
SHEET NO. 12

PROJECT NAME

INCOMPLETE PLANS

DO NOT USE FOR S/V ACCEPTANCE

PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION

0 50 100

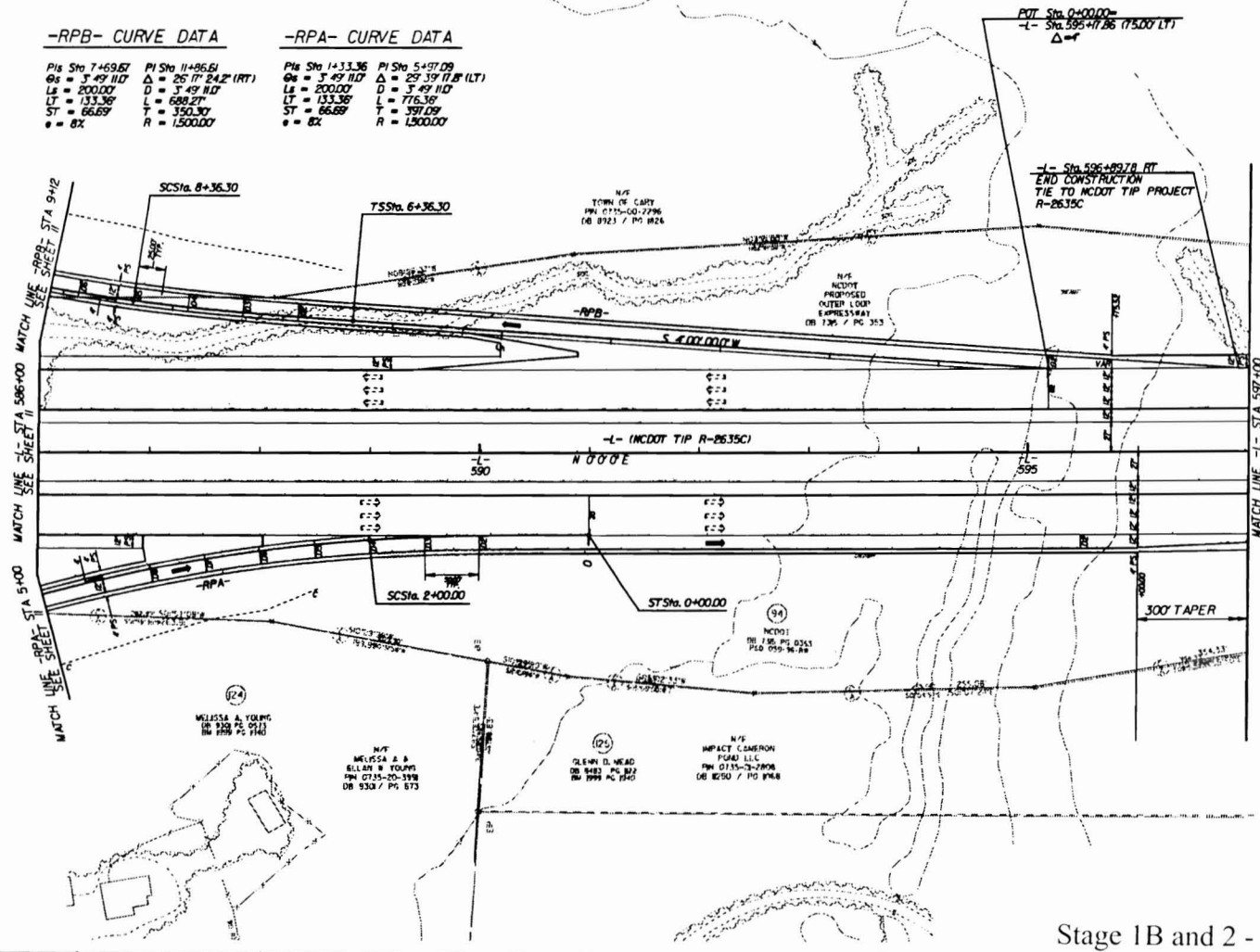
NAD 83

-RPB- CURVE DATA

PI Sta 7+69.67 PI Sta 11+96.61
GL = 3' 49" 11.0' Δ = 25' 17" 24.2' (RT)
LE = 200.00 D = 3' 49" 11.0'
LT = 133.36 L = 688.27
ST = 66.69 T = 350.30
R = 1500.00

-RPA- CURVE DATA

PI Sta 1+33.36 PI Sta 5+97.09
GL = 3' 49" 11.0' Δ = 29' 39" 11.8' (LT)
LE = 200.00 D = 3' 49" 11.0'
LT = 133.36 L = 776.38
ST = 66.69 T = 357.09
R = 1500.00



Stage 1B and 2 - Preliminary Drawings

Sheet 16 of 21

8/17/99

MORRISVILLE PARKWAY PROJECT ADDING ACCEL/ DECEL
LANES TO THE OUTSIDE OF -L- ONLY

FOR -L- PROFILE, SEE SHEET 17.18

Prepared by

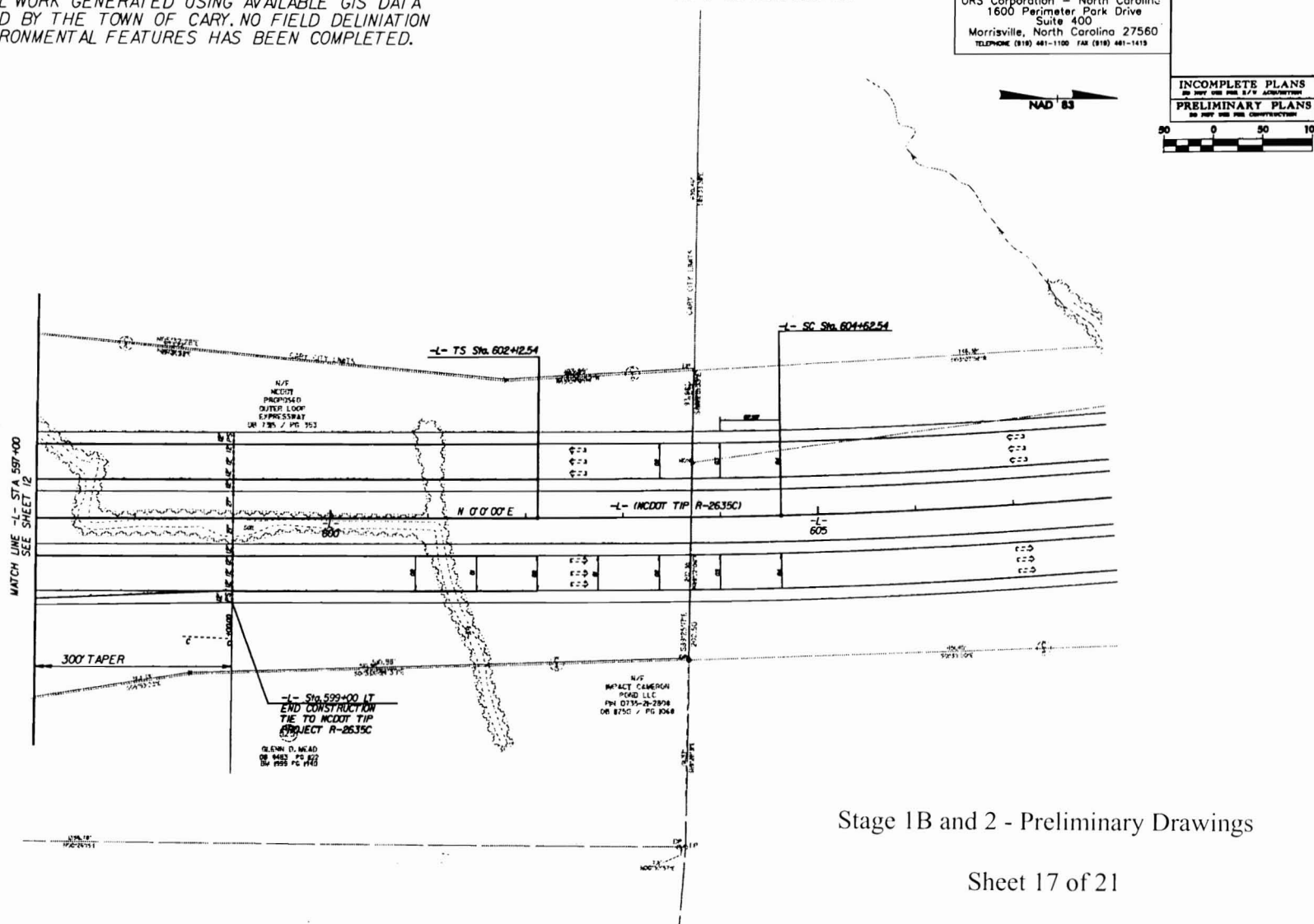
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PROJECT REFERENCE NO.	SHEET NO.
ST 1123	13
DW SHEET NO.	
PROJECT NUMBER	

INCOMPLETE PLANS

PRELIMINARY PLANS



Stage 1B and 2 - Preliminary Drawings

Sheet 17 of 21

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NOTE: ALL WORK GENERATED USING AVAILABLE GIS DATA PROVIDED BY THE TOWN OF CARY. NO FIELD DELINEATION OF ENVIRONMENTAL FEATURES HAS BEEN COMPLETED.

NOTE: PROPERTY AND EXISTING TOPO DATA INCOMPLETE FOR -MPE3- PROFILE. SEE SHEET 15

Prepared by

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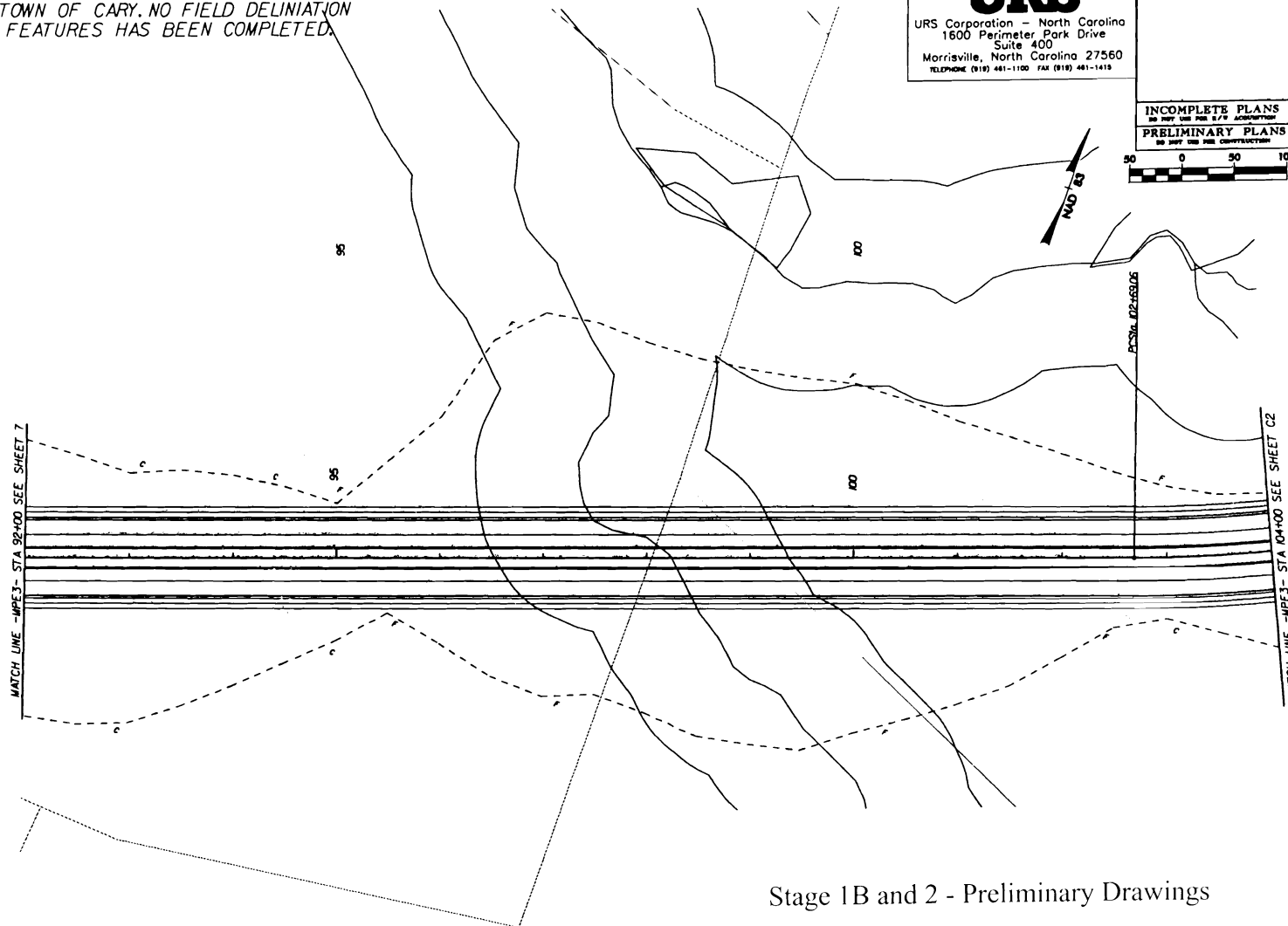
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Morrisville, North Carolina 27560
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PROJECT REFERENCE NO. ST 1123
SHEET NO. C1

DATE SHEET NO. PROJECT SHEET

INCOMPLETE PLANS
DO NOT USE FOR ADOPTION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

50 0 50 100



Stage 1B and 2 - Preliminary Drawings

Sheet 18 of 21

8/17/94

NOTE: PROPERTY AND EXISTING TOPO DATA INCOMPLETE
FOR -MPE3- PROFILE. SEE SHEET 15

Prepared by

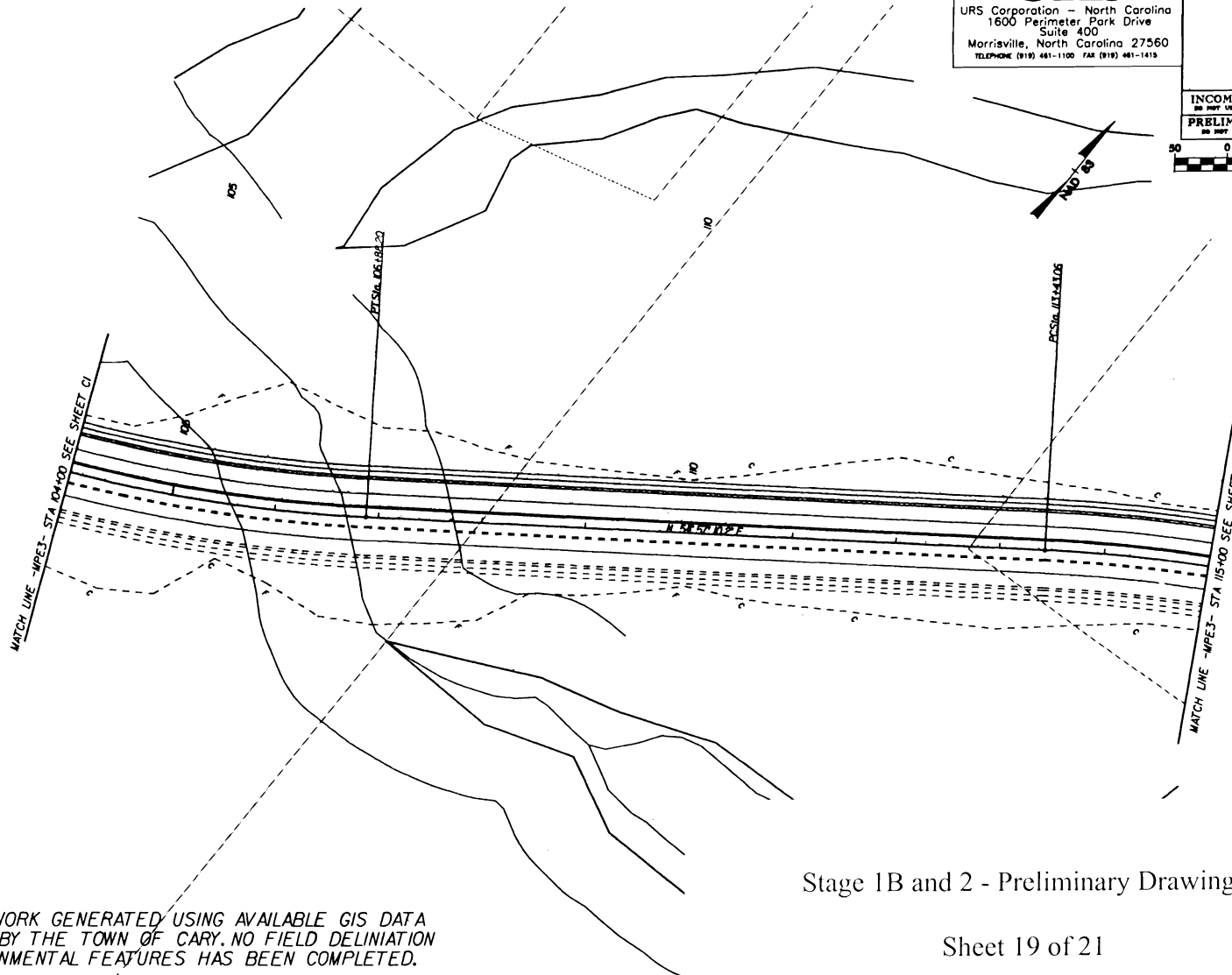
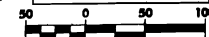
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PROJECT REFERENCE NO.	SHEET NO.
ST 1123	C2

DATE SHEET NO.
PROJECT SHEET

INCOMPLETE PLANS
DO NOT USE FOR S/F CALCULATIONS
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



NOTE: ALL WORK GENERATED USING AVAILABLE GIS DATA
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OF ENVIRONMENTAL FEATURES HAS BEEN COMPLETED.

Stage 1B and 2 - Preliminary Drawings

Sheet 19 of 21

8/17/98

NOTE: ALL WORK GENERATED USING AVAILABLE GIS DATA PROVIDED BY THE TOWN OF CARY. NO FIELD DELINIATION OF ENVIRONMENTAL FEATURES HAS BEEN COMPLETED.

NOTE: PROPERTY AND EXISTING TOPO DATA INCOMPLETE FOR -MPE3- PROFILE. SEE SHEET 15

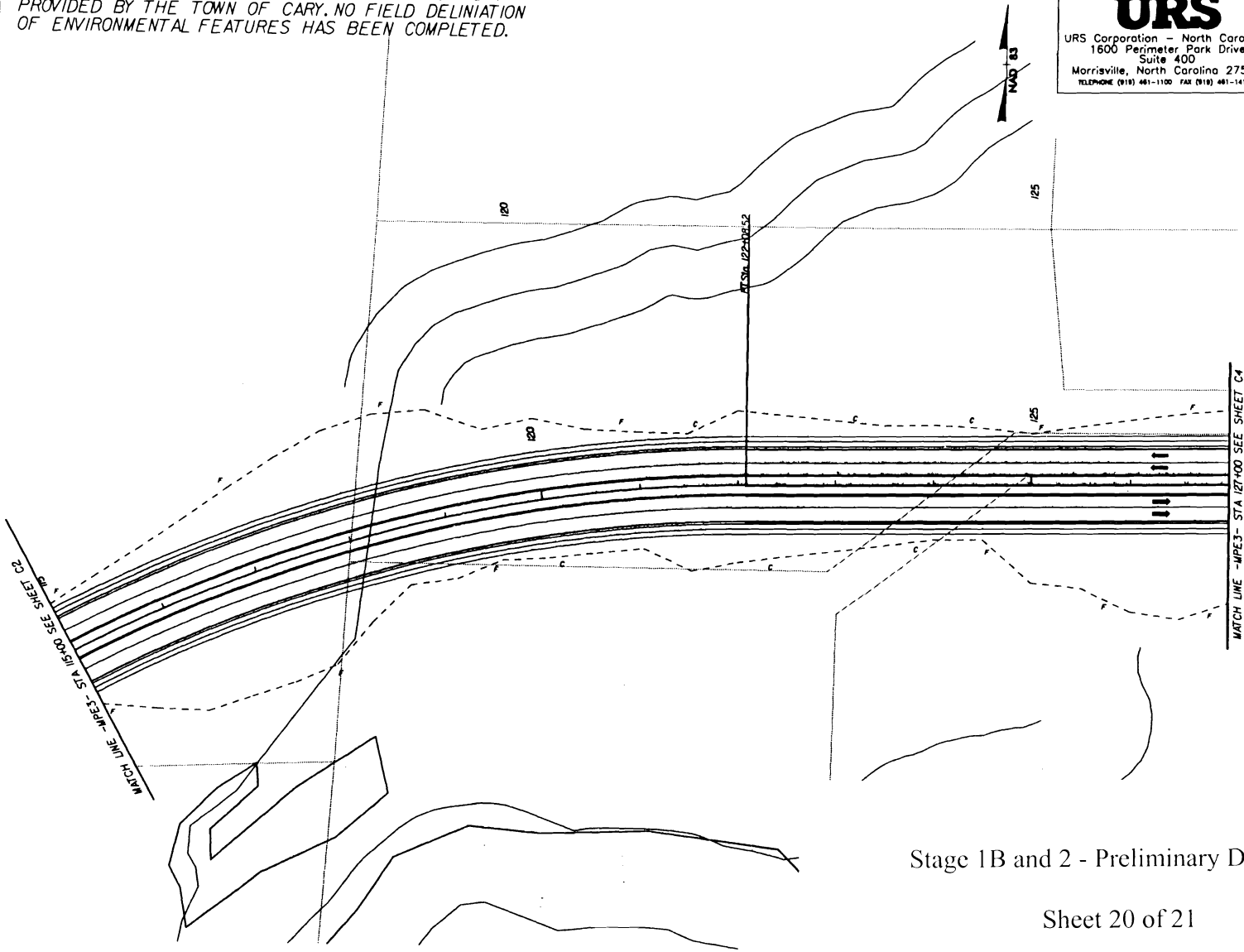
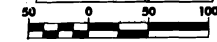
Prepared by

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Morrisville, North Carolina 27560
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PROJECT REFERENCE NO.	SHEET NO.
ST 1123	C3
SPR. SHEET NO.	
PROJECT SURVEY	

INCOMPLETE PLANS
DO NOT USE FOR S/U'S ADJUSTMENTS
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

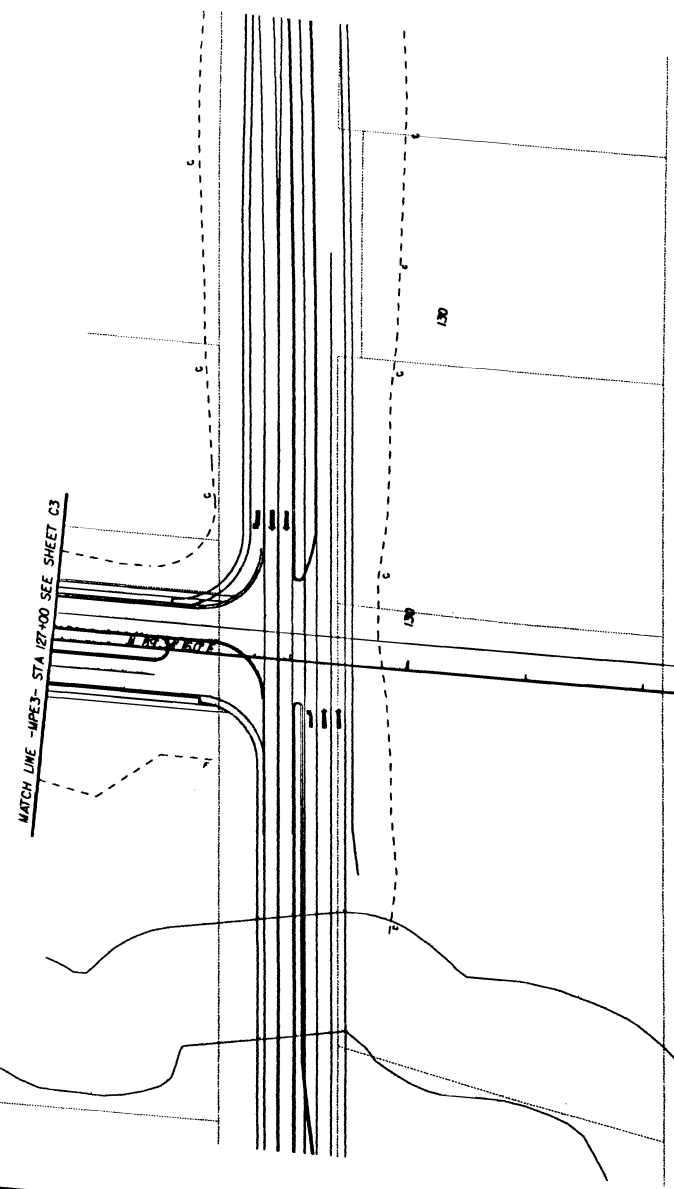


Stage 1B and 2 - Preliminary Drawings

Sheet 20 of 21

PROJECT: STAGE 1B AND 2 - PRELIMINARY DRAWINGS
SHEET: 20 OF 21
DATE: 8/17/98
DRAWN BY: [illegible]
CHECKED BY: [illegible]

8/17/99



NOTE: PROPERTY AND EXISTING TOPO DATA INCOMPLETE
FOR -MPES- PROFILE. SEE SHEET 15

Prepared by
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PROJECT REFERENCE NO.	SHEET NO.
ST 1123	C4
SHEET TITLE	
PROJECT NUMBER	
INCOMPLETE PLANS DO NOT USE FOR S/U/A ADJUSTMENTS	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Stage 1B and 2 - Preliminary Drawings

Sheet 21 of 21

NOTE: ALL WORK GENERATED USING AVAILABLE GIS DATA
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OF ENVIRONMENTAL FEATURES HAS BEEN COMPLETED.